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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/745,390	12/22/2000	Tony Mark	871.0011 USU	1123
29683	7590	06/09/2004	EXAMINER	
HARRINGTON & SMITH, LLP			DAO, MINH D	
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SHELTON, CT 06484-6212			PAPER NUMBER	
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DATE MAILED: 06/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/745,390

Applicant(s)

MARK ET AL.

Examiner

MINH D DAO

Art Unit

2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1,2,4,7,8,10,13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halperin et al. (US Patent 6,115,616).

Art Unit: 2682

Regarding claim 1, Halperin discloses a mobile station, comprising:

a communication part that comprises a controller (See Fig. 4, item 407), an RF transceiver (See Fig. 1, "Telephone Circuitry") and an antenna (See Fig. 4, item 410; Coll. 5, lines 3-4); and a self-powered (Col. 4, lines 15-18) information entry part comprising a keypad or keyboard module that is detachable from said communication part and that is coupled, when detached, through a wireless link to said communication part for conveying keystroke information from said information entry part to said communication part (Col. 2, lines 39-52). Reference Halperin fails to teach wireless communication between keypad and handset when the keypad is attached to the handset (in Halperin, when the keypad is attached to the handset (see fig. 2), a switch S2 activates the contacts C2 and deactivates the transmitter T2 and receiver R2 in the clipped position and activates the transmitter T2 and receiver R2 and deactivates the contact C2 in the unclipped position.). However, those skilled in the art would recognize that the above difference would not render the claim patentable over the reference Halperin, because it would merely depend on how one would like to have the keypad communicate with the handset (either wireless or not) when they are attached together. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify reference Halperin such that the keypad communicate wirelessly with the handset when they are attached together in order to simplify the circuitry design of the handset and keypad since the keypad and handset in reference Halperin are already capable of wirelessly communicating with each other.

Regarding claims 2 and 8 Halperin also teaches that the wireless link is comprised of an RF link (Col. 1, lines 49-58).

Regarding claims 4 and 10 Halperin further teaches that the keypad module comprises a source for providing operating power for said keypad module (Col. 2, lines 61-65).

Regarding claim 7, Halperin teaches a keypad module (See Fig. 1, item 16), comprising an engaging mechanism for being detachably coupled to a wireless communication (See Fig. 1, item 10) terminal and an interface for being coupled, when detached, through a wireless link to a wireless communication terminal for conveying keypad-generated information from said keypad module to said wireless communication terminal (Col. 2, lines 39-52). Reference Halperin fails to teach wireless communication between keypad and handset when the keypad is attached to the handset (in Halperin, when the keypad is attached to the handset (see fig. 2), a switch S2 activates the contacts C2 and deactivates the transmitter T2 and receiver R2 in the clipped position and activates the transmitter T2 and receiver R2 and deactivates the contact C2 in the unclipped position.). However, those skilled in the art would recognize that the above difference would not render the claim patentable over the reference Halperin, because it would merely depend on how one would like to have the keypad communicate with the handset (either wireless or not) when they are attached together. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify reference Halperin such that the keypad communicate wirelessly with

the handset when they are attached together in order to simplify the circuitry design of the handset and keypad since the keypad and handset in reference Halperin are already capable of wirelessly communicate.

Regarding claim 13, Halperin further teaches a method for dialing a telephone number, comprising steps of: providing a keypad module (See Fig. 1, item 16) that is detachably coupled to a wireless communication terminal (See Fig. 1, item 10; Col. 2, lines 39-42); entering information for specifying a telephone number using a keypad on the keypad module (Col. 4, lines 13-15); and a keypad module is detached from the wireless communication terminal, conveying keypad generated information from the keypad module to the wireless communication terminal through a wireless link (Col. 2, lines 39-52). Reference Halperin fails to teach wireless communication between keypad and handset when the keypad is attached to the handset (in Halperin, when the keypad is attached to the handset (see fig. 2), a switch S2 activates the contacts C2 and deactivates the transmitter T2 and receiver R2 in the clipped position and activates the transmitter T2 and receiver R2 and deactivates the contact C2 in the unclipped position.). However, those skilled in the art would recognize that the above difference would not render the claim patentable over the reference Halperin, because it would merely depend on how one would like to have the keypad communicate with the handset (either wireless or not) when they are attached together. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was

made to modify reference Halperin such that the keypad communicate wirelessly with the handset when they are attached together in order to simplify the circuitry design of the handset and keypad since the keypad and handset in reference Halperin are already capable of wirelessly communicate.

2. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halperin et al. (US Patent 6,115,616) and further in view of Harris (US 6,222,458).

Regarding claims 3 and 9, as indicated in the response for claim 1 and claim 7 above, Halperin fails to disclose that the wireless link is comprised of a Bluetooth link. Harris teaches that a wireless link is comprised of a Bluetooth link (See Fig. 1, items 100 and 105; Col. 1, lines 49-58). It would therefore been obvious to one of ordinary skill in the art at the time of the invention to have provided the teaching of Harris to Halperin in order to provide a low cost, effective way of short range communication using Bluetooth method.

3. Claims 5,6,11,12,14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halperin et al. (US Patent 6,115,616) and further in view of Klein (US Patent 5,958,023).

Regarding claims 5, 11 and 14 Halperin, in the response for claim 4 above, fails to teach that the source is comprised of at least one solar cell. Klein, in an analogous art

,teaches a use of solar cell in the power source (See Fig. 1, item 118; Col. 5, lines 13-17). It would therefore been obvious to one of ordinary skill in the art at the time of the invention to have provided the teaching of Klein to Halperin in order to come up with a simple, low cost way to provide power to a device.

Regarding claims 6 and 12, the combination of the teachings of Halperin and Klein further teaches a mobile station as in claim 5, wherein the source is comprised of at least one battery (reference Halperin , Col. 2, lines 61-65).

Regarding claim 15, Halperin discloses a mobile station, comprising:

a communication part that comprises a controller (See Fig. 4, item 407), an RF transceiver (See Fig. 1, "Telephone Circuitry") and an antenna (See Fig. 1, item 410; Col. 5, lines 3-4); and an information entry part comprising a keypad or keyboard module that is separate from the communication part and that is coupled through an RF link (Col. 1, lines 49-58) to the communication part for conveying keystroke information from the information entry part to the communication part. However, Halperin fails to teach that there is at least one solar cell for powering the keyboard module. Klein, in an analogous art, discloses the use of a solar cell located on the keyboard (See Fig. 1, item 118; Col. 5, lines 13-17) to support the power source for powering the module. It would therefore been obvious to one of ordinary skill in the art at the time of the invention to have provided the teaching of Klein to Halperin in order come up with a simple, low cost way to provide power to the keyboard module.

Regarding claim 16, the combination of the teachings of Halperin and Klein also teaches mobile station as in claim 15, wherein at least one of the mobile station and the module are adapted for being mechanically attached to one another and detached from one another (reference Halperin , Col. 2, lines 39-52).

Regarding claim 17, Halperin discloses an information entry module (See Fig. 1, item 16) that comprises a keypad or a keyboard and that further comprises an interface for being coupled through a wireless link to a wireless communication terminal (See Fig. 1, item 10) for conveying user-generated keystroke information from the module to the wireless communication terminal. However, Halperin fails to teach that the information entry module comprises at least one solar cell for powering the module. Klein discloses the use of a solar cell located on the keyboard (See Fig. 1, item 118; Col. 5, lines 13-17) to support the power source for powering the module. It would therefore been obvious to one of ordinary skill in the art at the time of the invention to have provided the teaching of Klein to Halperin in order to come up with a simple, low cost way to provide power to the keyboard module.

Regarding claim 18, the combination of the teachings of Halperin and Klein further teaches an information entry module as in claim 17, wherein at least one of the wireless communication terminal and the module are adapted for being mechanically attached to one another and detached from one another (reference Halperin, Col. 2, lines 39-52).

4. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halperin et al. (US Patent 6,115,616), Klein (US Patent 4,882,471) as applied to claim 17 above and further in view of Kinzie (US Patent 6,326,934).

Regarding claim 19, the combination of teaching of Halperin and Klein as mentioned above fails to teach an information entry module as in claim 17, wherein the wireless link is a uni-directional link. Kinzie teaches a wireless uni-directional link (Col. 6, lines 56-59). It would therefore been obvious to one of ordinary skill in the art at the time of the invention to have provided the teaching of Kinzie to Klein and Halperin in order to increase the transmission gain at a desired direction.

Regarding claim 20, the combination of teaching of Halperin and Klein as mentioned above fails to teach an information entry module as in claim 17, wherein the wireless link is a bi-directional link. Kinzie, on the other hand, teaches a wireless bi-directional link (Col. 6, lines 56-59). It would therefore been obvious to one of ordinary skill in the art at the time of the invention to have provided the teaching of Kinzie to Klein and Halperin in order to increase the transmission gain at a desired direction.

Response to Arguments

5. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

Regarding claims 1, 7 and 13, applicant argues that, on page 7 of the remark, reference Halperin fails to teach a keypad module that is detachable from the communication part and that is coupled, whether attached or detached, through to a wireless link to the communication part. The examiner agrees. However, even though Halperin fails to teach wireless communication between keypad and handset when the keypad is attached to the handset, those skilled in the art would recognize that the above difference would not render the claim patentable over the reference Halperin, because it would merely depend on how one would like to have the keypad communicate with the handset (either wireless or not) when they are attached together. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify reference Halperin such that the keypad communicate wirelessly with the handset when they are attached together in order to simplify the circuitry design of the handset and keypad since the keypad and handset in reference Halperin are already capable of wirelessly communicate.

6. Applicant's arguments with respect to claims 15-20 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MINH D DAO whose telephone number is 703-305-5589. The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, VIVIAN C CHIN can be reached on 703-308-6739. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Minh Dao


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